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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.        | CONFIRMATION NO.       |
|--|-------------|----------------------|----------------------------|------------------------|
| 10/531,647   | 04/15/2005  | Kazuhisa Ose         | Nissin-4-PCT/Minori        | 1563                   |
| 156 7590 08/24/2007<br>KIRSCHSTEIN, OTTINGER, ISRAEL<br>& SCHIFFMILLER, P.C.<br>489 FIFTH AVENUE<br>NEW YORK, NY 10017 |             |                      | EXAMINER<br>LEWIS, RALPH A |                        |
|  |             |                      | ART UNIT<br>3732           | PAPER NUMBER           |
|  |             |                      | MAIL DATE<br>08/24/2007    | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/531,647

Applicant(s)

OSE ET AL.

Examiner

Ralph A. Lewis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 18-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **Rejections based on Prior Art**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rabenstein et al. (2002/0049009) in view of Lang (5,030,102) and in view of Schulz et al. (3,458,936).

Rabenstein et al. disclose a model tooth system for securing a crown (page 1, paragraph 0002) in which there is a modeled root part and fixing part adjacent to the root part (Fig. 1, #'s 4 and 8). The fixing part is small cylindrical and surrounds the central axis. It has a constant dimension shaft (#8) and a variable dimension head (#11). The head is divided into multiple symmetrical divisions by a slot that extends along the axis of the shaft (Fig. 1, #9). The divided parts are deformable towards the central axis and each other (page 3, paragraph 0044). There is also a model tooth-fixing base into which the root part and the fixing part of the model tooth detachably fit (Fig. 3, #12). They are accommodated in a tooth-fixing hole (Fig. 3, seen in cross-section), which has the shape to lock in the swelling part of the tooth-fixing part of the tooth with a corresponding locking part on the tooth-fixing base (Figure 3, #16; Page 3, paragraph 0044).

Rabenstein et al. do not disclose that the head portion is greater in dimension than the shaft portion. Lang teaches a dental tooth model in which there is a root part (3), a shaft (6), and a head (4) and the head has a larger dimension than the shaft (Fig. 4). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the head and shaft of the tooth model of Rabenstein et al. so that the head was larger than the shaft, as taught by Lang, so that there is a tighter fit when inserting the dental model tooth into the corresponding slot or hole.

Rabenstein et al. also do not disclose the fixing part being detachably connected to the root part and that the model base is in the shape of a human jaw and has a passage with to differently sized portions for receiving the shaft and the head of the fixing part. Schulz et al. disclose a dental model tooth in which the fixing part is detachable from the root part of the tooth. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dental tooth model of Rabenstein in view of Lang so that the fixing part was detachable, as taught by Schulz et al., so that individual teeth and fixing parts could be interchangeably replaced when one or the other became excessively worn.

Rabenstein et al. also do not disclose that the fixing part is made of an elastic resin with a bend elastic modulus of 800 to 10,000 MPa. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the tooth model of Rabenstein et al. with a fixing part made from a elastic resin with a bend elastic modulus in the range of 800-10,000 Mpa, since it has been held to be within the

general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Schulz et al. also disclose a dental models base in the shape of the human jaw (Fig. 1) for receiving the fixing part of the tooth with a locking snap fit action. There is a passage with a smaller portion for the shaft (28) and a larger portion for the head (18). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Rabenstein in view of Lang so the dental model base of Lang had a two portion passage with different dimensions for receiving both the shaft and the head of the fixing part, as taught by Schulz et al., so that the dental model tooth fit more tightly within the model base.

Rabenstein et al. also do not disclose that the maximum protuberant height of the enlarged part is 5-50% of the outer diameter of fixing part and that 30-90% of this maximum protuberant height is engaged with the locking part. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the enlarged tooth fixing part of Rabenstein et al. to be 5-50% of the outer diameter of fixing part and have 30-90% of that maximum protuberant height engaged with the locking part, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

### **Response to Applicant's Arguments**

In response to the present rejection applicant argues that the fixing part of Schulz is not detachable and removable from the root part as is required by the claims, but rather the two pieces are molded together. The examiner notes, that two pieces are nearly always detachable from one another with the proper tools, Applicant is encouraged to clearly set forth structure which provides for such a coupling rather than relying on broad sweeping language that two elements are detachable from one another.

### **Action Made Final**

All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any


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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry concerning this communication should be directed to **Ralph Lewis** at telephone number **(571) 272-4712**. Fax (571) 273-8300. The examiner works a compressed work schedule and is unavailable every other Friday. The examiner's supervisor, Cris Rodriguez, can be reached at (571) 272-4964.

R.Lewis  
August 20, 2007

  
Ralph A. Lewis  
Primary Examiner  
Au3732